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Head Capsule Measurements of Minnesota Larch Sawflies

Head capsule measurements in the larval stages of particular insects are of value to entomologists in studies of the evolutionary processes in species development and, in many cases, as a basis for timing control operations. Also, entomologists who are beginning biological studies find them useful in separating the various instars (developmental stages of the larvae).

In the course of recent research on the larch sawfly (Pristiphora erichsonii (Htg.)), measurements were made of the head capsules of 20 larvae in each of the five instars. An eyepiece micrometer was adjusted to a Spencer 26-LG binocular microscope, and measurements were taken across the greatest width of the head capsule. No overlapping of head capsule widths in the different instars was observed. The results are tabulated in the following table:

Larch sawfly head capsule measurements^{1/}

Instar	Width			Standard deviation	Standard error	Coefficient of variation
	Mean	Maximum	Minimum			
	Mm.	Mm.	Mm.	Mm.	Mm.	Percent
1	0.57	0.59	0.53	+0.018	+0.004	3.17
2	0.80	0.84	0.74	+0.027	+0.006	3.38
3	1.16	1.20	1.12	+0.019	+0.004	1.64
4	1.62	1.68	1.58	+0.035	+0.008	2.16
5	2.12	2.18	2.05	+0.037	+0.008	1.75

^{1/} Specimens were collected near Cass Lake, Minnesota, in June 1952, and preserved in 70-percent ethanol. Measurements were made the following December.

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